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## Study of Hospital Referrals in the Pilot Program in Alexandria, Egypt

*October 2000*

*Prepared by:*

**Mary Lyn Villaume, M.S.**  
Consultant  
Abt Associates Inc.

**Marwa Ezzat**  
Abt Associates Inc.

**Gary Gaumer, Ph.D.**  
Abt Associates Inc.



Partnerships  
for Health  
Reform



Abt Associates Inc. ■ 4800 Montgomery Lane, Suite 600  
Bethesda, Maryland 20814 ■ Tel: 301/913-0500 ■ Fax: 301/652-3916

*In collaboration with:*

Development Associates, Inc. ■ Harvard School of Public Health ■  
Howard University International Affairs Center ■ University Research Co., LLC



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Partnerships  
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Reform

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Karen Cavanaugh, COTR  
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# Abstract

This technical report is a study of referrals in the primary health care reform of family health units in Alexandria, Egypt. The family health units are part of a pilot project and as such are still a work in progress. The study documents the completion of a USAID Health Policy Support Program deliverable in the form of a study of referral rates and costs. It shows that the referral rates from the family health units are very low (less than 2 percent of all encounters). A finding of potential importance is that of the in-hospital services covered by the Basic Benefits Package, which indicates that referrals for chronic disease comprise 80 percent of the total number of referrals and are the most expensive to the system per admission. The report also contains a review of literature of policy and service delivery related to health system referrals in five countries.



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# Acronyms

<b>BBP</b>	Basic Benefits Package
<b>ENT</b>	Ear, Nose, Throat
<b>FHC</b>	Family Health Center
<b>FHF</b>	Family Health Fund
<b>FHU</b>	Family Health Unit
<b>FP</b>	Family Practice
<b>HC</b>	Health center
<b>HIO</b>	Health insurance organization
<b>HMO</b>	Health Management Organization
<b>HPSP</b>	Health Policy Support Program
<b>LE</b>	Egyptian pounds
<b>MOHP</b>	Ministry of Health and Population
<b>PBS</b>	Patient-based system (a computerized database for patient records)
<b>PHR</b>	Partnerships for Health Reform Project (USAID)
<b>USAID</b>	United States Agency for International Development



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# Acknowledgments

This report describes work carried out with funding from the United States Agency for International Development (USAID), through its mission to Egypt and the Partnerships in Health Reform (PHR) project. PHR efforts in Egypt seek to implement the health reform program of the Ministry of Health and Population, particularly in the area of primary health care systems.

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The contributions of the directors and staff of the Seuf Family Health Unit and the directors and staff of the Abu Qir Family Health Unit are immeasurable. The directors of Sharq el Medinah and Abu Qir Hospitals provided assistance and important records.

Overall, the PHR technical support team would like to express its appreciation to the Ministry of Health and Population of Egypt and the Alexandria Health Directorate for their partnership in the important work of primary health care reform.



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# Executive Summary

This technical report has two purposes:

1. To provide documentation for the completion of the USAID Health Policy Support Program (HPSP) deliverable –
  - > Benchmark 2.1 part 1) “Report of a study of the actual cost of referrals in the pilot district, based on data covering the period July 1999 to July 2000. This report should be based on the observed number of referrals on behalf of FHF enrollees during this period, together with estimates of their actual cost in MOHP facilities.”
2. To provide a review of policy and service delivery literature related to health system referrals –
  - > For health reform financing to be successful, it is essential to know the volume and cost of referrals for covered services and to adequately plan for their financing. This report documents the volume of referrals through the actual completed referral forms made from the two most mature pilot facilities, Abu Qir and Seuf, to the participating hospitals, Abu Qir HIO Hospital and MOHP Sharq El Medinah Hospital
  - > As the Egyptian health reform proceeds, its planners can use the experience of others in designing a uniquely appropriate Egyptian system. Among the many issues raised, some of the most salient have to do with the quality of communication and trust between patient and doctor, the clarity and timeliness of the referral system itself, and communication and feedback between referring and consulting physicians. A concern to any health system is the referral rate. The ideal rate should be as low as possible without compromising patient care. The present rate at the pilot sites is considerably lower than that usually reported in the studies reviewed.

The four categories of services that are part of the Basic Benefits Package (BBP) are reported separately. Referrals for all services that are not included in the BBP or that are for other hospitals are reported as one figure.

The costs of the referred services included in the BBP are those provided by the general directors of the contracting hospitals and are based on costing methodology developed by the Cost Recovery Project. Costs of services not included in the BBP are not considered in this report.

In the referenced time period, July 1999 to July 2000, the Family Health Fund had not yet begun paying for referred hospital services. To complete the financing picture, data were collected on the user fees that hospitals charged for these services.



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# 1. Background

This research on referrals takes place in the context of the Ministry of Health and Population (MOHP) reform of the primary health care delivery system and its financing. Fundamental to this reform is the creation of family health units (FHUs) and family health centers (FHCs). The FHUs provide all first encounter primary care services to a roster of families. The FHCs provide first-level specialty care defined by the Basic Benefits Package. FHCs are staffed with specialists in Internal Medicine, Obstetrics/Gynecology, and Pediatrics. Combined, these two kinds of facilities are intended to provide nearly all the basic primary health services. Thus a mother can take her children to one place to obtain immunizations; diagnosis and treatment of coughs, colds, and childhood diseases; stitches for minor wounds; and other primary health services. She and her husband can also obtain family planning advice and assistance, annual medical checkups, and diagnosis and treatment of the most common chronic diseases, including diabetes and hypertension.

The Basic Benefits Package (BBP) is a key element in the current health reform program. The BBP is an integrated collection of cost-effective health interventions designed to reduce the burden of disease. In the case of Egypt, the content of the BBP was the result of many discussions held at the national level in Cairo and the governorate level in Alexandria. These discussions involved key MOHP staff, including representatives of the Technical Support Office, the Primary Health Care, and the Maternal and Child Health Directorates; program managers; members of the Quality Improvement Unit; and technical staff from the World Bank and the European Union. Included in the package are referral services from FHU primary care physicians to FHC specialists. The package also provides for referrals to contracting hospitals for selected services, including deliveries, stabilization of common chronic diseases, and treatment of the acute phase of common infectious diseases. A study of the organization, management, and cost of these hospital referrals is the focus of this report. During the study time period, July 1999 to July 2000, the Family Health Fund was not yet operating and, therefore, patients had to pay whatever the hospital charged. The hospitals involved, Sharq el Medinah and Abu Qir, both participated in the Cost Recovery Project. At the start of the program, no special discounts were given to FHU/FHC referred patients.

At the time of this analysis there were five FHUs and two FHCs – all located in the Montazah and Sharq districts in the Alexandria Governorate. The FHU and the FHC at Abu Qir are located in the same building. This is also true at Seuf. The three other FHUs are at Korshid, Mohsen, and Gon. They are operated entirely by the MOHP according to the reform model demonstrated in the Seuf MOHP facility. They are smaller than the FHUs at Abu Qir and Seuf.

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## 1.1 Referrals in the Pilot System

Because the reform project is concerned with providing accessible, quality, primary health care, it is expected that most primary services will take place in the FHU/FHCs. Contracting hospitals, upon referral by the doctor in the FHU/FHC, may provide certain other services. The BBP covers the following inpatient hospital services:

- > Deliveries
- > Neonatal care attendant to these deliveries

- > Minor surgeries
- > Inpatient stabilization services for patients with acute episodes related to chronic illnesses such as diabetes and hypertension.

Also included in the BBP are emergency room services for management and stabilization of common emergencies such as burns, acute asthma, or acute asthma(replace with??).

It is expected that hospital (external) referrals will compose a very small percentage of the total number of patient visits to the FHU/FHCs.

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## 1.2 Referral Issues

This section explores some of the referral issues that health systems in other parts of the world have found to be important. A summary of these issues is presented to assist policy makers in structuring the reform system in the best possible way for Egypt. (See also Annex A.)

The studies reviewed originated in Ireland, Zambia, the United States, Taiwan, and England. (A review of each article is contained in Annex B. Annex C is a tabular representation of referral issues discussed in the articles. The bibliography, Annex E, contains exact article citations). Each study had its own particular point of interest; however, a number of issues were identified in more than one study. Several articles explored issues that could be grouped under the heading of “Operational Issues.” These could be loosely defined as “how the system is supposed to work” and “how the system actually works.” Review of the literature shows that in all countries studied, a successful referral system has the following characteristics:

- > The right patients get referred. Patients who do not need specialist intervention do not get referred, and patients who really do need such interventions are not denied referrals.
- > The consulting (referred to) appointments are scheduled to take place in a reasonably short time after the primary care visit.
- > The consulting doctor communicates back to the referring doctor in a reasonably short amount of time so that correct follow-up care can be provided.

The studies found many additional issues to be important in ensuring the operational success of the referral system. To expand on the most important ones, it is safe to say that the single issue that had the most bearing on success was the timeliness of the consulting appointment. If the consulting appointment was scheduled to occur less than three weeks after the primary care visit, it was usually kept. The longer the delay, the fewer appointments were kept.

The second operational factor strongly contributing to the success of the referrals system was the communication between the referring and the consulting physicians. When the primary care doctor contacted the consulting doctor directly and made the appointment, the appointment was much more likely to be kept and the consulting physician was more likely to provide communication back to the referring doctor about the status of the patient and recommendations for follow-up care.

Patient-related operational factors that contributed to a successful referral system were a good sense of trust and communication between the doctor and the patient, clear simple referral forms given to the patient (rather than verbal commands), and the perceived quality of patient care, both at



the referring and the consulting institutions. Quality of communication and care are often subjective determinations and rely on patient perceptions. But in these studies at least, it appears that perception can be a powerful prediction of behavior.

Another set of issues could be grouped under the heading of “Cost – to the system and to the patient.” Referral consultations obviously cost more than primary care consultations. In many countries health care managers pay close attention to the referral rates, that is, the number of patients referred as a percentage of the total number of patient visits to the primary care centers or units. In all the studies reviewed, the reported referral rates were higher than the present rate in the pilot system. The average referral rate of the six studies was approximately 8 percent. It would be misleading to compare the 2.9 percent referral rate this study found in the pilot system to those in other long-established systems. As the pilot system matures and all participants become more accustomed to “how the system is supposed to run,” it would be important to monitor the referral rate and cost every quarter. In calculating the likely referral rate it is important to pay attention to two demographic considerations: the proportion of women and the proportion of elderly. Both of these groups tend to have higher referral rates than the average for the population as a whole. As the patient tracking system is more fully utilized, it will be possible to determine if these demographic patterns hold true in Egypt.

The cost to the patient, or the patient’s perception of the cost, has a powerful bearing on the success of the referral system. In places where the population is economically disadvantaged, the cost of transportation to the consulting physician’s location can be enough to cause patients not to go, regardless of the severity of the symptoms for which they are being referred. Another important cost issue from the patient’s perspective is the cost of drugs. Persons with very little disposable income will attend referrals at facilities where they expect the prescribed drugs to be available and free. If the drugs are not expected to be available and free, the patient will not complete the referral. In areas of economic abundance where prescription drugs are covered by the health insurance system, this is not an issue.

In summary, the issues most important to a referral system are the following:

- > Timeliness of the consulting appointment – the more quickly a patient can accomplish the recommended referral, the more likely the referral is to take place
- > Communication between referring and consulting physicians and patients
- > Patient trust and perception of quality
- > Cost of referral care to the patient.



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## 2. Present Status of FHU/FHCs and Cooperating Hospitals in Alexandria

This reform of primary health care delivery and financing is presently in the first pilot phase. There are currently two pilot FHC sites and five FHUs, all in the Montazah and Sharq districts of the Alexandria Governorate. The FHUs and FHCs at Seuf and at Abu Qir are housed in the same building. The FHU/FHC at Seuf is an MOHP facility and is expected to refer patients as necessary to Sharq el Medinah Hospital. The Abu Qir FHU/FHC is a Health Insurance Organization (HIO) expected to make its referrals to the Abu Qir Hospital. Both of these hospitals are cost recovery hospitals.

The actual practice, however, is a bit more complex. The Abu Qir FHU is an HIO pilot site. The HIO also has a hospital in the area, the Gamal Abdel Nasser Hospital. Because approximately 60 percent of the Abu Qir FHU patients are enrolled in the HIO plan, they are referred to this hospital rather than to the Abu Qir Hospital. Primary care physicians report that non-HIO patients prefer to be referred to Gamal Abdel Nasser Hospital because they perceive HIO facilities to provide better quality care.

The Seuf FHU also has a delivery room; therefore it makes very few referrals to Sharq el Medinah Hospital for deliveries. As at Abu Qir, patients needing referrals may request to be referred to a different hospital. In some cases, they may request to be referred to a hospital they presume will be less expensive than a cost recovery facility.

Initial referral tracking systems in the pilot depended on the completion of paper referral forms for the cooperating hospitals. Thus no information is currently available for referrals to other hospitals.



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## 3. Volume and Cost of Referrals

This report provides information on two important areas of the referrals system as it was operating in the Alexandria pilot during the period July 1999 to June 2000. The first area is the volume and cost of referrals. The second is the referral rate to hospitals, which is discussed in the next section. Clarification of terms follows:

- > Volume – the number of referrals during the study period (July 1, 1999, to June 30, 2000) according to a manual count of the referral forms
- > Cost of referrals – the average cost per covered service at the two cooperating hospitals as estimated by the Cost Recovery Project costing methodology and reported by the hospitals' directors
- > Referral rate – the number of referrals as a percentage of total patient visits.

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### 3.1 The Volume of Referrals

#### 3.1.1 Methodology

Data on the volume of referrals were collected at the Seuf and Abu Qir pilot sites from July 1, 1999, through June 30, 2000. The number of referrals made was determined by an actual count of referral slips at the registries in the referring facilities. There is a three-part referral form booklet in every Family Practice room. The third copy of the form remains in the booklet in the patient consultation rooms. Referral forms for the specified hospitals were collected from every Family Practice consulting room. (Annex D provides a sample of this form.) The referred service is also specified; e.g., delivery, minor surgery. Only referrals to the target hospitals, Sharq el Medinah and Abu Qir (MOHP), were counted.

This report does not present any data on patient compliance with referrals, i.e., whether the patient actually attended a referral appointment. In addition, this study does not analyze referral rates by any patient roster or population variables, which would be needed to extrapolate the findings to other locations.

Although no specific demographic or social economic studies have been carried out on the catchment areas of the two FHUs at Abu Qir and Seuf, an attentive observer can deduce that the populations are different. Abu Qir has a large population of fishermen, carpenters, and other trades people who have no predictable income and no insurance. Large factories surround Seuf. The majority of the persons enrolled at Seuf have steady incomes and HIO insurance. A more extensive study of the two areas would certainly explain some of what might be seen as irregular findings in this study.

Referrals are a complex subject. As this report examines data from only the first year (or less) of operation of these two pilot sites, no attempt to generalize in a predictive fashion should be made.

### 3.1.2 Findings

#### 3.1.2.1 Seuf

Between July 1, 1999, and June 30, 2000, 28,178 patient visits were recorded at Seuf. Of these, 280 were referred to Sharq el Medinah Hospital. Table 1 presents the data.

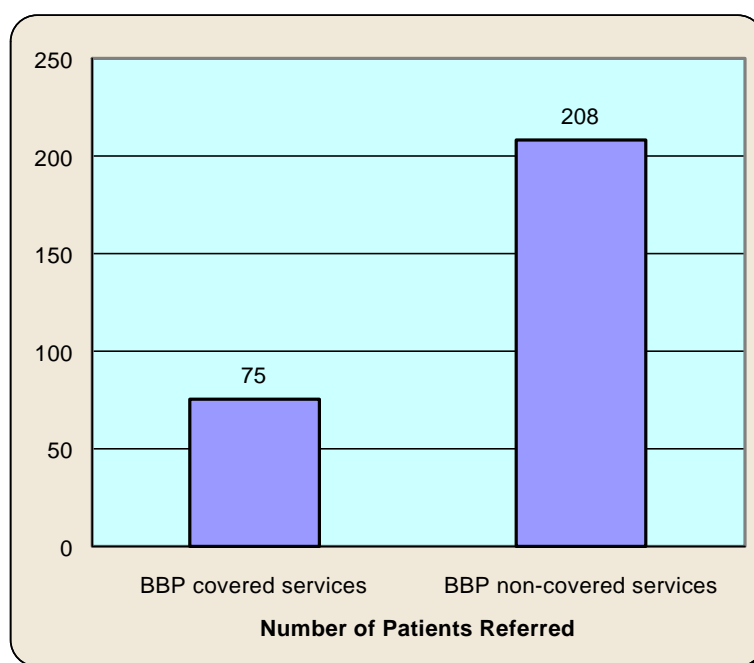
**Table 1: Number of Referrals Made from Seuf FHU**

From Seuf FHU	To Sharq el Medinah Hospital	Average per Month
1. Deliveries	1	.08
2. Neonatal	2	0.16
3. Minor surgery	12	1.00
4. Chronic care	60	5.00
Total BBP referrals	75	6.25
Non-BBP referrals*	205	17.08
Total referrals	280	23.33

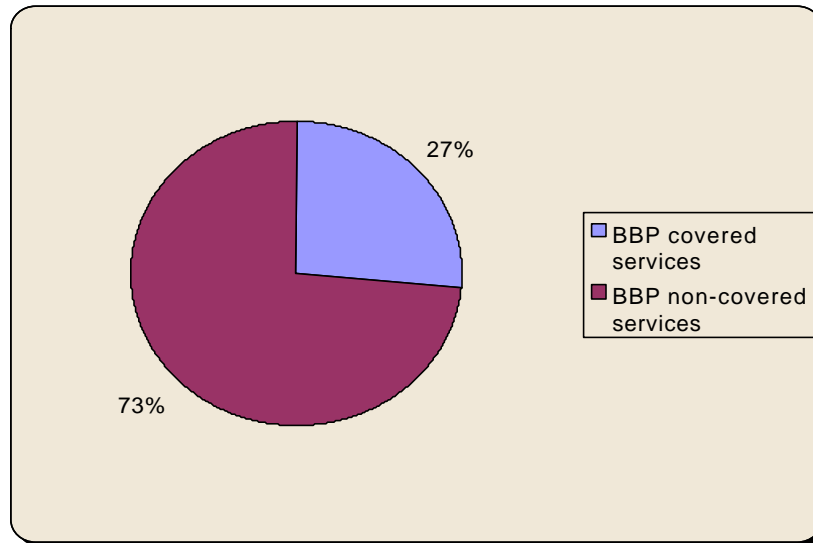
Source: Director and Medical Records Department in Seuf FHU

Figures 1-8 in this section are based on these data.

**Figure 1: Comparison of Patients Referred for Covered and Noncovered Services**

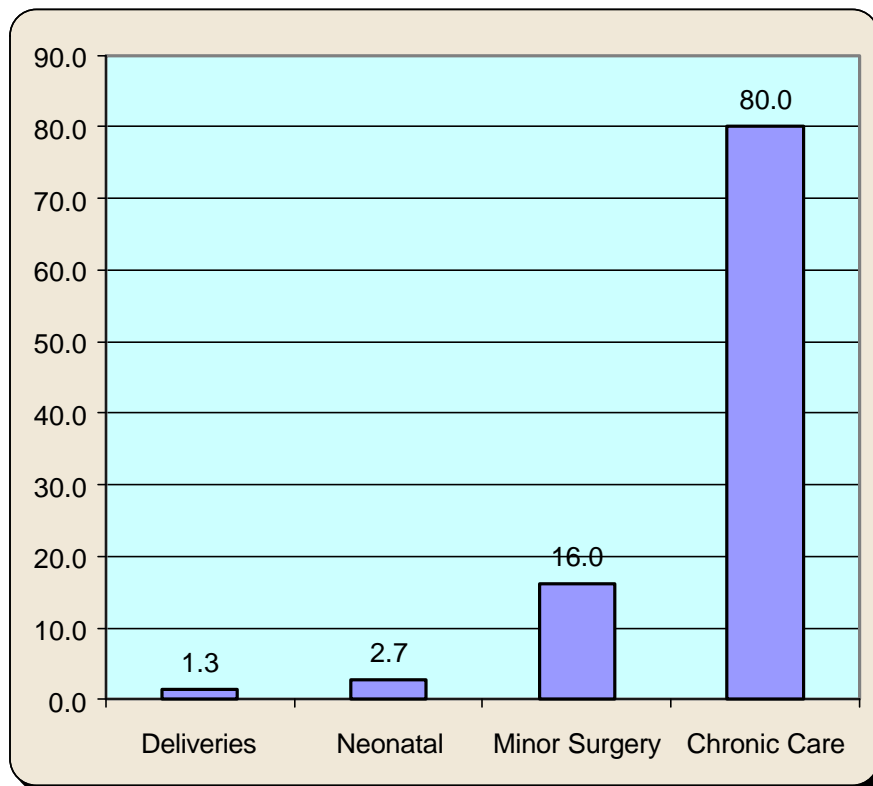


**Figure 2: Percent of Referrals for Covered and Noncovered Services**



As Figures 1 and 2 indicate, nearly three-quarters of the referrals were made for services that are not covered by the BBP. Figure 3 deals with BBP covered services only. It shows the proportion of referrals to Sharq el Medinah Hospital from the Seuf FHU for the specified services covered by the Basic Benefits Package.

**Figure 3: Proportion of Referrals by Service Expressed as Percent of Total Referrals**



These data make it very clear that the vast majority of referrals to the hospital are for chronic care services.

### 3.1.2.2 Abu Qir

At the Abu Qir FHU, 39,976 patient visits were recorded between October 1999 and June 30, 2000; of these, a total of five patients were referred to Abu Qir Hospital, as Table 2 indicates.

**Table 2: Number of Referrals Made from Abu Qir FHU**

From Abu Qir FHU	To Abu Qir Hospital	Average per Month
1. Deliveries	0	0
2. Neonatal	0	0
3. Minor surgery	1	0.11
4. Chronic care	2	0.22
Total BBP referrals	3	0.33
Non-BBP referrals	2	0.22
Total referrals	5	0.55

*Source of data:* Director and Medical Records Department in Abu Qir FHU

*Note:* These data encompass referrals to Abu Qir Hospital only. Referrals to the HIO hospital are not included.

Because the total number of referrals to Abu Qir MOHP Hospital is so small, no charts or analyses are provided.

## 3.1.3 Discussion

### 3.1.3.1 Sharq el Medinah

It can be observed from Table 1 that only one delivery was referred to Sharq el Medinah Hospital. This is primarily because Seuf has a delivery room, and patients were encouraged to utilize this facility. During the period studied, there were 88 deliveries at Seuf, or approximately seven deliveries per month. (Source: MOHP Technical Support Office data.)

It is not known how many, if any, referrals were made to hospitals other than Sharq el Medinah. When the Family Health Fund and the complete BBP become fully operational, these services will be paid for only at hospitals contracted by the Family Health Fund as referral sites. This had not yet occurred during the study period, so patients had a full range of choice of hospitals. They were also required to pay whatever the hospital charged. It is expected that when the financing provisions of the BBP become fully understood and operational, most patients will elect to be referred to the contracting hospitals because of the financial savings they will experience. If that happens, then the referral rate as computed in this study will increase.

The non-BBP referrals were for services that would not have been paid for if the BBP payment scheme had been in effect. It is important to observe that non-BBP covered services accounted for more than two and a half times the number of referrals for BBP covered services.



### **3.1.3.2 Abu Qir**

The FHU at Abu Qir came on line in October 1999. This explains why the data were collected for a shorter period of time than at Sharq el Medinah.

At Abu Qir, 60 percent of the patients are covered by the HIO. If these patients had needed referrals, they would have been sent to the HIO hospital, Gamal Abdel Nasser. The remaining 40 percent of Abu Qir patients may also choose to be referred to Gamal Abdel Nasser Hospital. This study counted only the referrals to Abu Qir General Hospital, which is operated by the MOHP. As with Sharq el Medinah, the patient paid for all hospital referrals during the study period, and patients could choose which hospital they would be referred to, based on their perceptions of quality of care, cost, proximity, or other factors. The fact that no deliveries were referred to Abu Qir Hospital could be interpreted as an indication that pregnant women preferred to deliver somewhere else; but, in fact, the data provide no information about where births are taking place as that information is outside the scope of this study. With such a small number of referrals, no conclusions can be drawn, but it is interesting to note that BBP covered referrals and non-BBP covered referrals are nearly equal in number.

### **3.1.4 Conclusions**

The preponderance of referrals for services that will not be covered by the BBP has important ramifications. To avoid disappointing patients who might have unrealistic expectations of the BBP, it will be very important to explain explicitly the referral coverage. Since the patients referred during the studied time period relied on existing coverage either through HIO or MOHP programs, one might conclude that the cost of the referred services is not a major impediment to the completion of the referral. However, because the hospitals do not keep records on the origin of admitted patients, it was impossible to determine how many referrals were completed. When the patient tracking systems are fully operational, further research should be done to determine the rate of completion. Attention should also be paid to the potential deterrent factor of the cost of noncovered services. With so few referrals taking place out of Abu Qir FHU to Abu Qir Hospital, it is difficult to draw any conclusions or future expectations. As long as the majority of Abu Qir patients are enrolled with HIO, however, it is likely that most of the referrals will be to the HIO hospital.

The vast proportions of referrals for covered services were for care for patients in acute stages of chronic diseases, specifically hypertension and diabetes. As the reform system matures, this distribution of referrals should be carefully watched. The financial implications of the pattern presented in this report are discussed in the following section.

## 3.2 Cost of Referred Services

### 3.2.1 Cost to the Hospital

The researchers met separately with the directors of the two hospitals at each of the respective hospitals and asked them to provide the cost to the hospital per specified service. The directors agreed to provide referral costs based on the existing methodology developed by the Cost Recovery Project.<sup>1</sup> The directors agreed on the appropriate average cost figures, as shown in Table 3.

**Table 3: Average Cost to the Hospital per Admission**

Services	Average per admission to hospitals in Egyptian pounds
1. Deliveries	100
2. Neonatal	108*
3. Minor surgery	75
4. Chronic care	240**

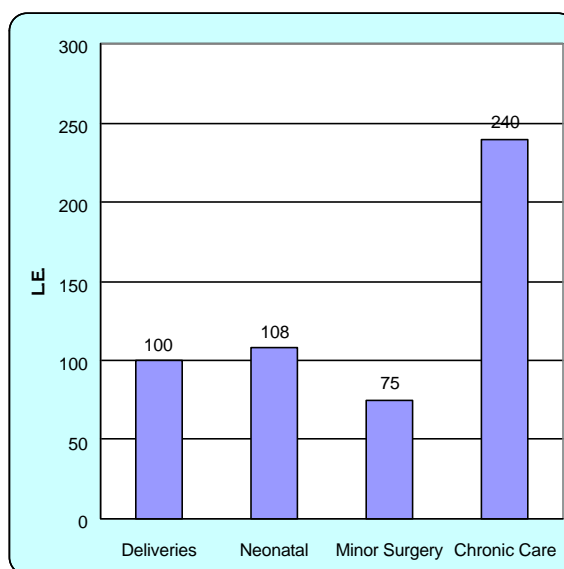
Source: Directors of Abu Qir General and Sharq el Medinah Hospitals

Notes: \* This figure assumes six days at LE 18 per day.

\*\* This figure represents eight days at LE 30 per day.

Figure 4 is a graphic representation of the data provided in Table 3. It shows that chronic care is the most expensive covered service per admission to the hospital.

**Figure 4: Cost to Hospital per Covered Service (LE)**



Source: Directors of Abu Qir and Sharq el Medinah Hospitals

<sup>1</sup> USAID. November 1994. "Guidelines for Annual Implementation Plans, Cost Recovery for Health Project." Cairo, Egypt.

### 3.2.2 Cost to the Referred Patient

To determine the cost of the referred service to the patient, the directors of the respective hospitals were asked to provide the amount charged for each specified service. Current user fees charged by the two hospitals for the specific covered services are shown in Table 4.

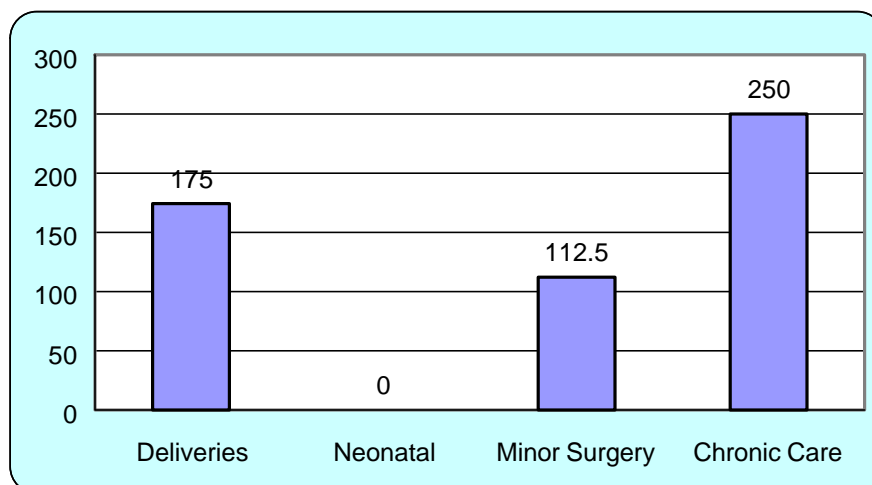
**Table 4: User Fees per Admission**

Services	Average fee per admission, both hospitals, in LE
1. Deliveries	175.0
2. Neonatal	0.0
3. Minor surgeries	112.5
4. Chronic care	250.0
Average All Services	134.4

Source: Directors of Abu Qir General and Sharqel Medinah Hospitals

Figure 5 shows the cost per admission to the patient for the respective covered services.

**Figure 5: Cost to Patient per Service**



### 3.2.3 Conclusion

#### 3.2.3.1 Comparison of Patient Costs and Hospital Costs

As the figures indicate, the hospitals charge nearly twice their stated cost for most of these services. Neonatal services are included in the charge for a delivery at these hospitals. The financing of neonatal services needs further examination. A comparison of these costs and charges has implications for funding that the Family Health Fund will be able to negotiate with the hospitals.

**Figure 6: Comparison of Costs of Covered Services (LE)**

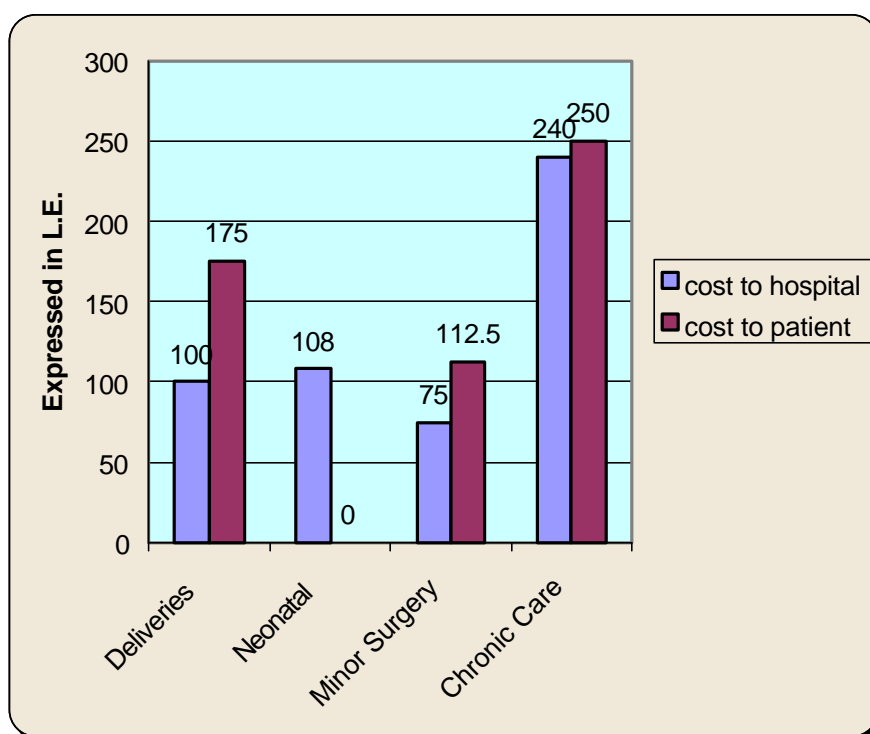


Figure 6 shows that the pilot hospitals recovered their stated cost for these services. It should be noted that neonatal services are included in the charge for a delivery at these hospitals. In other words, whatever the patient pays covers both the delivery and neonatal care.<sup>2</sup> The important exception is the case of hospital care for treatment of chronic disease. The hospitals charge, per admission, only a small amount more than their own cost. All of this has implications for the level of discounts that the Family Health Fund will be able to negotiate with the hospitals for services provided to members.

### 3.2.3.2 Annual Costs

All the table and charts in this report used the data available at the time this report was written. Table 5 and the accompanying figures are based on the data for the Seuf FHU only.<sup>3</sup> Taken as illustrative rather than strictly predictive, these can provide an idea of the relative costs to the hospital, and thus to the health system financing, of the respective referral services at the rate of use documented in this report. The reader must bear in mind that all figures are from the first year of operation of a pilot project that continued to develop and change during the reporting period and beyond.

<sup>2</sup> Certain inconsistencies that appear here should be resolved in future studies.

<sup>3</sup> The number of reported referrals from Abu Qir is five. Adding them to the Seuf figures would make no statistical difference, but as the data represent sites that differ in many ways, it seems wiser to report only those that comprise a functional sample. It is recommended that this study be repeated in 2001 in order to obtain more complete data on the developing referrals system.

**Table 5: Cost to Hospital, Extrapolated to Annual Estimates**

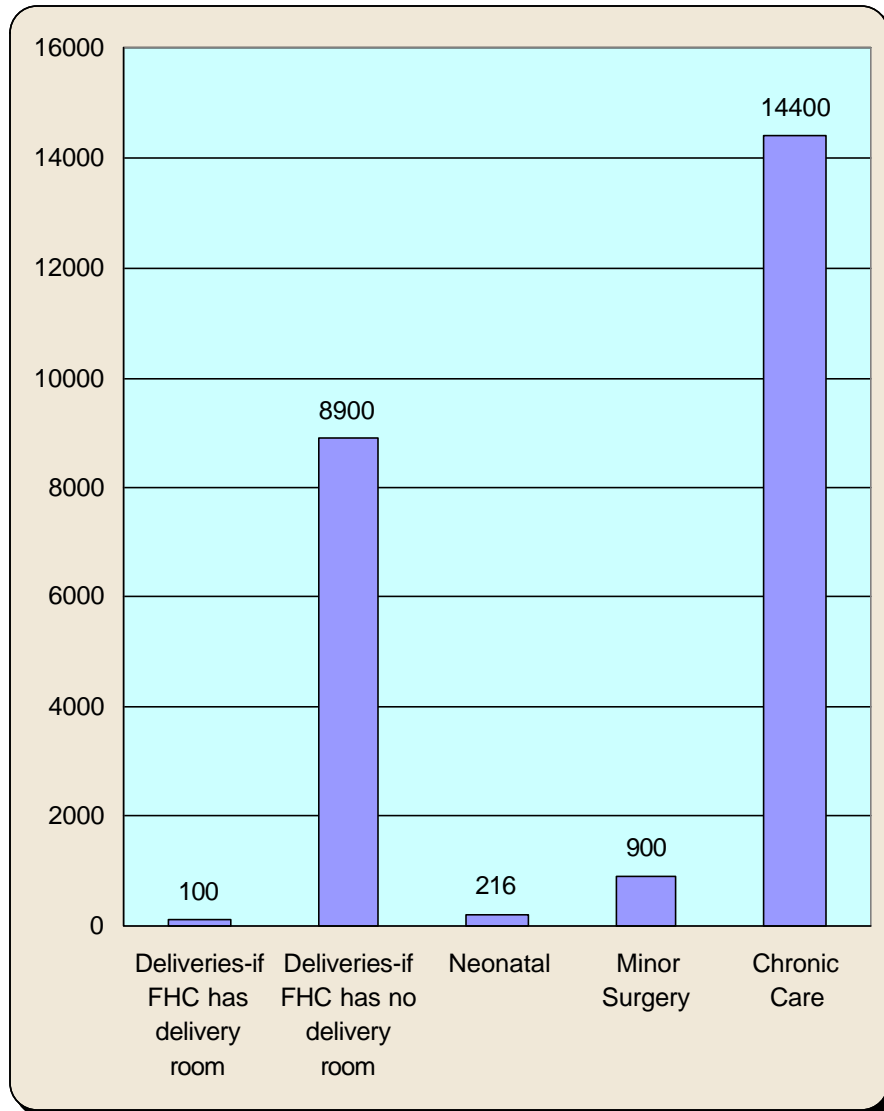
	<b>A</b> Volume per Year	<b>B</b> Cost per Service	<b>C</b> A X B = Annual Cost
Deliveries – if FHC has delivery room	1	100	100
Deliveries – if FHC does not have delivery room	89	100	8900
Neonatal	2	108	216
Minor surgery	12	75	900
Chronic care	60	240	14400
Total Annual Cost			15,616

Column A in Table 5 shows the number of referrals per year for the given services. Column B shows the cost to the hospital for each service. Column C shows the cost in LE to the hospital for the year for each of the covered services.

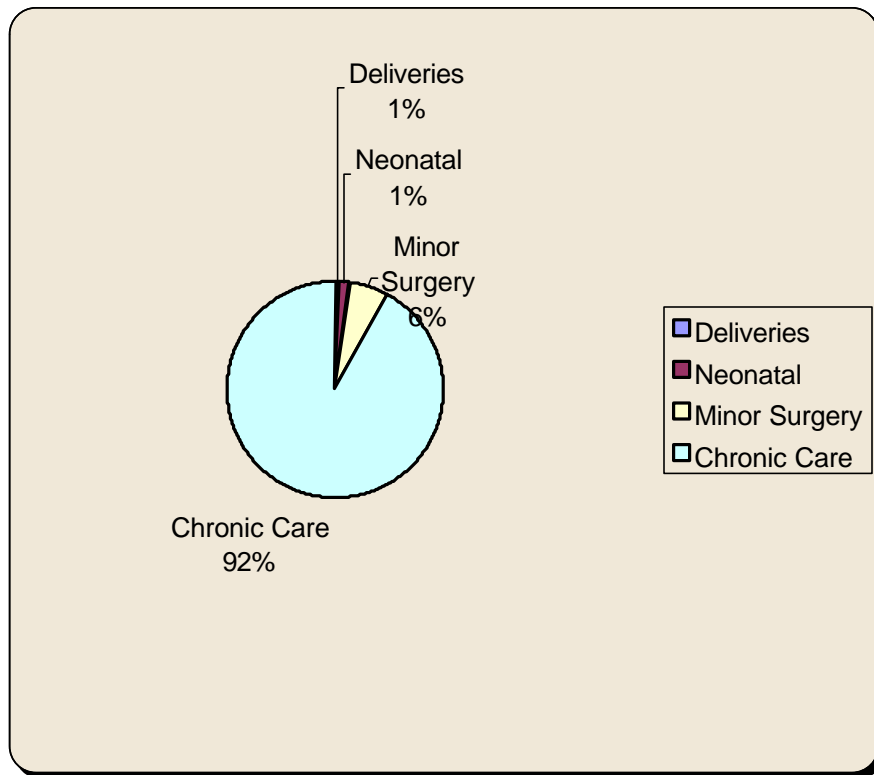
The volume of deliveries for the period at the FHC was 88. If there was no delivery room at the Seuf Center, the annual cost to the hospital for deliveries would increase to LE 8,880 and would represent the second highest cost.

Figure 7 is a graphic representation of the summation of these data. It shows the approximate cost of each covered service on an annual basis. Figure 7 also makes the relative cost to the system of chronic care dramatically visible. Figure 8 shows the proportion of cost to the system for each service provided.

**Figure 7: Approximate Annual Cost to Hospital**



**Figure 8: Proportion of Cost to System for Each Type of Covered Service**



It is clear in both Figures 7 and 8 that if the cost and referral volume remain approximately in the same range as those reported for the period June 1999 to July 2000, the cost of cases referred for chronic care services would consume the major portion of referral services financing. In other words, if LE 100 were allocated to cover the cost of all referrals, chronic care would consume LE 92 of that total.

If the proportion of referrals per covered service remains similar and the number of enrollees grows, the cost of chronic care would increase proportionately.





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## 4. Referral Rates

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### 4.1 Methodology

A second study of referrals was completed on May 31, 2000. This study, conducted by Michael Forte, provides information on the rate of referrals as a percentage of total patient visits. Mr. Forte visited all five of the FHUs in April and May 2000 and obtained the data in two ways. The smaller MOHP FHUs keep manual ledgers in which all referrals are written. Mr. Forte and his Arabic-speaking assistant compiled a manual count of all these referrals. Seuf, the largest MOHP FHU, was in the early stages of using the computerized MOHP system. In this case, the Technical Support Team of the MOHP in Alexandria provided a count, which they obtained from the patient-based system (PBS). The researchers then compared these data with those in the paper ledgers, which were still being kept manually. At Abu Qir, the HIO FHU, the special PBS had not yet come on line, so the data were collected manually from the ledgers. These data reflect the number of patient visits and referrals. The data were recorded separately for internal and external referrals. Internal referrals are defined as referrals from the FHUs to the FHCs. External referrals are defined as referrals from the FHUs to a hospital. The primary subject of interest in the present technical report is the external referral rate. The referral rate is found by dividing the number of referrals by the number of patient visits and expressing it as a percentage.

Table 6 in the following section (4.2 “Findings”) provides the only record in this report of internal referrals. The term “referrals” in all other cases means “external referrals”; that is, those from the primary care facilities to the hospitals. The data here reflect all external referrals. No breakdown is provided for the facilities the patients were referred to nor for the type of service they were referred for. The study on volume and cost of referrals is restricted to those referrals made to Sharq el Medinah and Abu Qir hospitals and only for BBP services. For example, what is counted here as a referral might consist of a referral to a private hospital for heart surgery. The study on volume and cost would not have counted this as a referral. Thus it is quite reasonable that the number of reported referrals is much greater in Mr. Forte’s study. It is also possible that patients enrolled at Seuf and Abu Qir already have specialists whom they see directly without being referred.

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## 4.2 Findings

### Referrals as a Percentage of Total Patients

Table 6 shows that, as in the study discussed in the previous section, the volume and percentage of external hospital referrals represent a very small proportion of the total number of patient visits.

**Table 6: Patient Visits and Referral Cases, January – March 2000**

Family Health Unit	Total patient visits	Total referrals	Internal referrals FHU to FHC No. & % of all referrals	External referrals FHU to hospital No. & % of all referrals	External referral rate*	Total referrals as % of total patient visits
Seuf	5,638	214	152 (71%)	62 (29%)	1.1	3.8
Abu Qir	14,022	1001	340 (34%)	661 (66%)	4.7	7.1
Korshid	2,346	32	N/A*	32	1.4	1.4
Mohsen	4,320	48	N/A*	48	1.1	1.1
Gon	2,105	31	N/A*	31	1.5	1.5
Total	28,431	1,326	492 (41.1%)	(58.9%)	2.9	4.7

Note: Source: May 31, 2000, PHR Technical Report, Medical Records Systems Assessment, by Michael Forte.

\* Referral rate = number of referrals divided by number of patient visits X 100.

\*\* These FHUs do not have the specialists found in FHCs; therefore, they cannot make internal referrals.

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## 4.3 Conclusions

The average referral rate of 2.9 percent for the five FHUs is very low compared with the referral rates reported in the six studies referenced elsewhere in this report (where the average rate is approximately 8 percent). It will be important to pay attention to clinical practice guidelines and patient outcomes to be sure the patients needing referrals are actually getting them.

Since this 2.9 percent rate includes *all* referrals to *all* facilities, one can assume that the actual referral rate to contracted hospitals for BBP covered services would be even lower.

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## 5. Conclusions

This technical report provides the Verification Element (a) of Benchmark 2.1: “Systems implemented to increase the efficiency and effectiveness of MOHP hospitals.” This report demonstrates that the volume and percentage of referrals are quite low and that the current copayments for covered services are sufficient to cover the actual costs of care.

The main conclusions are summarized below:

- > The referral rates as recorded and reported in the first year of operation of the pilot project in Alexandria are low compared with international averages. At this point in time, no judgement can be made concerning this fact.
- > The majority of referrals were for services not covered by the BBP. This has important implications for customer satisfaction and program marketing/consumer education.
- > Copayments charged by the cooperating hospitals are adequate to cover the average cost of care for the services covered by the BBP. This has important implications for the reimbursement rates and discounts that the Family Health Fund will be able to negotiate with these hospitals.
- > Chronic care has the highest referral rate and the most expensive cost of admission. Projected annually, the present figures indicate that 92 percent of all referral funds will be spent on chronic care. In this study sample, the majority of deliveries were performed in the FHC. If all deliveries are referred to the hospital, they will represent the second largest cost category.



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## 6. Recommendations

The following are the recommendations resulting from this study:

- > The Family Health Fund should initiate and maintain surveillance of referral procedures to ensure that referrals are correctly documented and accurately reported. A study similar to the present one should be done in August 2001 in order to have a more complete and up-to-date picture of the constantly changing realities of the pilot project.
- > According to the literature reviewed, the timeliness of the referred consultation is very important in ensuring the success of the referral. At the time this report was written, incomplete data from the hospitals impeded knowing whether the referrals were completed in a timely fashion, or if they were even completed at all. Once the hospitals are completely online, this data can, and should, be collected. Ideally the consulting physicians should be using the same PBS and should be recording their findings on the computerized patient records. Once this is done, it will be relatively simple to determine the time between referral and consultation. It will also allow the consulting doctor to perform the important function of communicating about the referred patient to the referring doctor.
- > The current method of providing the patient with one of the triplicate copies of the referral slip is widely viewed as contributing to patient compliance with referrals and should be continued.
- > In addition, patient compliance and patient care are likely to be improved if the referring doctor consults the specialist by phone. However, this may not be practical in the present environment. Although Egypt's telephone system functions adequately, the waiting time for obtaining a "fixed line" is excessive. Thus, even these government-sponsored facilities do not have enough lines and it is very difficult for physicians to have access to them. The senior officials of the MOHP should develop a priority list of needed telephones and insist at the highest levels that they be installed immediately in FHUs associated with the pilot projects.
- > It is strongly recommended that the Family Health Fund initiate routine cost reporting for referrals of the covered hospital services as a preliminary step to negotiating referral agreements with cooperating providers. The Family Health Fund should undertake additional cost studies to ensure that the cost of the BBP is accurate
- > In-hospital covered chronic care services has the highest number, proportion, and cost of any referral. It is recommended that family care providers be given advanced training in the maintenance and care of patients with chronic conditions so that fewer of them will need to be referred. Financing for chronic care will be used more efficiently if only those patients who truly need inpatient care are referred.
- > The placement of deliveries is an important policy decision. In this study, the Seuf Center completed the vast majority of deliveries. If these had been referred to the hospital, average referral costs would have increased. Consumer preferences, safety, and quality of care are important considerations in the placement of deliveries. A study focused on this issue is recommended.

- > Operational issues relating to referrals will become increasingly complex as more FHUs and FHCs begin to provide care. It is vital that all primary care providers understand the importance of accurate and complete referral documentation. Annual refresher courses are recommended for all providers, especially as forms and procedures continue to change.
- > Consumer information regarding referral options and costs should be available and distributed to all interested potential customers.
- > A method for periodic review of the BBP, which takes into account actual referral rates for covered and noncovered services, should be defined. Such a review would provide a way to look for opportunities to improve patient satisfaction while maintaining BBP cost-efficiency.

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# Annex A: Summary of the Main Issues Concerning Referrals in Primary Health Care Systems

The six articles reviewed in Annex B all discuss various aspects of the referrals system in the different countries studied. All took place in urban settings, but the socioeconomic status of the patients varied widely. Despite these differences in distribution and demographics, several key issues can be identified.

- > **Referral rate:** This is defined as the number of referrals divided by the number of total patient visits in any given time frame. Thus, for example, if 4,822 patients are seen and 280 of these are referred, the referral rate is 5.8 percent. Because referrals to specialists cost the health insurance system additional money, managers of health care systems worldwide prefer to keep the referral rate as low as possible without compromising patient care and outcome. In the studies reviewed, the referral rate ranges from a low of 2.3 percent in Taiwan to a high of 8 percent in Lusaka, Zambia. Factors found to influence the referral rate include the age of the doctor: physicians older than 37 make fewer referrals than younger ones. The demographics of the patient base also influence the referral rate: women and older persons are referred more frequently, regardless of the type of specialty to which they are referred. Thus, doctors with higher proportions of female and elderly patients will have higher referral rates. These factors were observed in such diverse locations as Tainan, Taiwan; Portland, Oregon, USA; and Belfast, Ireland, UK. In Lusaka, Zambia, this variance was not observed: referred patients in-hospital were equally distributed by gender in both the adult and pediatric wards.
- > **Failure rate:** A second issue discussed in two-thirds of the articles is that of noncompliance with referrals. This is also called the failure rate. In other words, what percentage of patients who are referred do not attend their consultation with the specialist? This is a very important question from the system cost point of view as well as from the patient care and outcome point of view. In the studies reporting noncompliance rates, the rates ranged from a low of 10.6 percent in Taiwan to a high of 29 percent in Palo Alto, California.

## Reasons cited for referral failure rate:

- > **Too long a time to wait** between the visit to the general or family physician and the appointment with the specialist or consulting physician. This was cited as the primary reason for failure in all four studies that attempted to answer the question (Belfast, London, Taiwan, and Lusaka).
- > **Poor communication**
  - ↑ **Doctor to patient:** Poor communication between the doctor and the patient was cited in the studies taking place in Taiwan, Lusaka, and London. Part of the issue is how much information the doctor shares with the patient. In Lusaka, 80 percent of the patients who were referred did not know their diagnosis or why they were referred. In

addition, the patients complained that the doctors hurried them through the consultation and were “rude.” Generally, all of the studies indicated that patients who knew more about their illness or situation had higher compliance rates.

- ↑ **Patient to doctor:** The study from London (Lloyd, 1993) reports on a different kind of communication as being the best predictor of noncompliance: “Patients were significantly less likely to attend if they had been unable or only partly able to discuss their health problem with their general practitioner.” In other words, doctors who listened to patients explain and discuss their symptoms produced higher compliance rates than doctors who simply gave (or didn’t give) the patients their diagnosis and told them what to do. One of the biggest complaints patients had about the health centers in Lusaka was that the doctors “did not listen.”
- ↑ **Consulting physician to referring physician:** An important aspect of communication in the referral process is the communication the consultant provides to the referring physician. Obviously, if the patient will be returning to the referring physician for continuing care, the physician must know the results of the consultation with the specialist. In the Lusaka study, the authors report a “striking lack” of communication back from the consultant to the referring physician. In Belfast, referring physicians for 24 percent of the patients who saw a consultant received no communications. The authors state, “Inevitably the management of a number of these patients will be compromised.” In any referral system, good communication is essential for the optimum outcome for the patient and the success of the system.



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## Annex B: Summaries of Referrals Articles

### Article #1

McGlade, K.J., T. Bradley, G. Murphy, and G. Lundy. 1988. "Referrals to hospital by general practitioners: A study of compliance and communications." *BMI* 297 (November 12, 1988).

This study took place in the Department of General Practice, Queen's University Belfast. The area has high unemployment and socioeconomic deprivation. During the 14 weeks of the study, the general practice saw 4,822 patients. The referral rate was 5.8 percent (280/4822). Of the 280 patients referred, the noncompliance rate was between 15 percent and 20 percent. The general practice uses a triplicate referral form: the patient is expected to mail one of the forms to the consulting physician, one copy remains in the patient notes (folder), and the other copy is filed for auditing.

There were two research questions: 1) Why do patients not attend their referral appointments, and 2) In what percent of referrals do the consulting physicians provide feedback or communication to the referring physician within 20 weeks after the appointment.

The study found that "Prolonged waiting times from referral to appointment were significantly related to non-attendance." If the waiting time was two months or less, there was a 6.6 percent noncompliance rate (median time, 36 days). If the waiting period was more than two months, there was a 28.6 percent noncompliance rate (median time, 86 days).

At 20 weeks, more than 75 percent of the referrals had been followed up by a written communication to the referring doctors; however, 24 percent of the referrals had no return communication from the consulting physician. The authors of the study state, "Inevitably the management of a number of these patients will be compromised."

Women received more referrals than men did: 1:1.7 referrals compared with a population ratio of 1:1.2.

"Referrals...should be regarded as a complex process which frequently breaks down."

"Serious flaws exist in the communication process, and means must be sought to overcome them if patient care is not to suffer."

The authors suggest following the advice contained in Grace and Armstrong <sup>4</sup>: "To gain full compliance and maximize the effect of any course of action or treatment the patient should be aware of the reasoning behind that action and should have taken part in arriving at that decision."

### Article #2

Donohoe, M.T., R.L. Kravitz, D.B. Wheeler, R. Chandra, A. Chen, and N. Humphries. 1999. "Reason for outpatient referrals from generalists to specialists." *JGIM* 14 (May 1999).

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<sup>4</sup> Grace J.F., and D. Armstrong. 1999. "Reasons for referral to hospital; extent of agreement between the perceptions of patients, general practitioner and consultants." *Social Science and Medicine*, 49:27-38.

This study took place in Palo Alto, California, an area that has generally high socioeconomic and educational levels among the population. The research question posed was to determine the “relative importance of medical and nonmedical factors influencing generalists’ decisions to refer, and the factors that might avert unnecessary referrals.”

This study found that both medical and nonmedical reasons influenced physicians in making referrals in 76 percent of the cases. The most common medical reasons given by the referring physician were to get advice about therapy (63 percent), to obtain assistance with making a diagnosis (58 percent), to confirm a diagnosis (46 percent), and to perform a diagnostic procedure. In all cases, communication back to the referring physician from the specialist was essential for the referring physician to continue appropriate patient care.

The most common nonmedical reasons cited were to meet the community standard of care (34 percent), to accede to the patient’s request for referral (33 percent), and to learn how to deal with similar cases in the future (32 percent).

The study found that referrals were made for medical reasons in only 20 percent of the cases and for nonmedical reasons in only 3 percent.

With regards to the second research question—which referrals might have been averted—the study found that telephone communication between the referring doctor and the specialist might have averted 33 percent of referrals. Additional training in certain simple procedures might also have averted many referrals. The most commonly cited procedures were skin biopsy and flexible sigmoidoscopy.

The following table, which is Table 8 on page 284 in Article #2, shows the “percentage of referrals for which generalists felt the factors listed would definitely or probably have allowed them to avoid referral at that time.”

**Referral Avoidability**

Avoidable Through	%
Training in procedures such as skin biopsy or flexible sigmoidoscopy	17
Consultation with a trusted generalist colleague	13
Telephone consultation with specialist	12
The presence of a health educator	10
Readily available clinical practice guidelines	7
Longer length visit	6
Computerized medical expert systems	4
MEDLINE search capabilities	2
Subspecialty tests	1

Additional findings indicated that certain doctors make more referrals than others do, but no explanation was offered for this.

The noncompliance rate was given as 29 percent, but causes were not explored. Those patients whose referrals were based on having “a condition too complicated for generalist to handle,” or who had a physician who needed “help with understanding a radiographic or laboratory abnormality” were *less* likely to keep their specialty appointments than others. One would like to have more elaboration on this finding.

Specialists rated the majority (70 percent) of the referrals as timely, of average complexity, and appropriate. However 30 percent of the referrals were considered “possibly appropriate” or “inappropriate.”

A finding not reported in the other articles is that “patient request for referral influenced one-fifth of referral decisions.” This is most likely related to the demographics of the patient population.

### **Article #3**

Bachman, K.H., and D.K. Freeborn. 1999. “HMO physician use of referrals.” *Social Science and Medicine* 48:547-557.

This study was conducted at Kaiser facilities in Portland, Oregon. Kaiser is one of the first and largest Health Management Organizations (HMOs) in the United States. It enrolls people from all walks of life and from all socioeconomic backgrounds. In health care delivery in the United States, the following are generally considered the defining characteristics of HMOs:

- > An enrolled population
- > Responsibility for delivering necessary medical care within a fixed budget
- > Low or no financial barriers to enrollee use
- > Risk sharing by providers, not just the insurer
- > Voluntary choice of plan.

The authors stated that “patient dissatisfaction with policies to restrict direct access to specialists is growing.” As in Article #2, there is concern that factors other than patients’ medical needs may influence referral patterns. However, the factors explored in this study are quite different than those cited by Donohoe et al. The present study seeks to explore the psychological factors that impinge on physicians as a result of the structure of their work environment.

The research hypothesis states that the “greater stress from uncertainty, higher job demands and a decreased sense of control would be associated with higher referral rates and higher levels of physician burnout.”

Although physicians study and train to be practitioners of medicine, they find themselves employed by organizations that have demands and expectations regarding many aspects of the actual practice of medicine. This study seeks to define and measure some of these factors and determine their influence on the referral rates of the general practice physicians.

In western cultures, one’s sense of control over one’s life often correlates highly with one’s sense of psychological well-being. This need for control usually also extends into one’s work life as well. Studies in Egypt have found that a different set of factors tends to contribute to a sense of well-being and job satisfaction. The prestige of one’s title and the proximity of family and friends are ranked higher here than in the west.<sup>5</sup> For these reasons, the findings of this study may or may not have relevance in Egypt.

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<sup>5</sup> AUC, Department of Social Science, 1993.

This study measured the physicians' sense of control according to their perceived ability to impact the work environment. One measure of this included their opportunity to participate in decision making. This was measured by doctors' satisfaction with their level of control over their own schedules. This was then used as a predictor of the doctor's psychological well-being. This was expected to correlate with each doctor's rate of referrals.

The study also explored the extent to which lack of autonomy contributes to feelings of stress.

The study measured the patient load by dividing the number of office visits per week by the number of hours per week spent seeing patients. It also used a self-reported measure of referral utilization (percentage of monthly load referred for consultation) and the Tedium Index.

The study found that stress from uncertainty (SUS) is higher in younger and in female physicians, but is only weakly associated with an increased referral rate. Overall, these physicians had a 7.1 percent referral rate. But physicians under 37 years of age had a higher rate than older ones: 9.5 percent vs. 6.4 percent.

Physicians who *perceived* their workload as too high had a significantly higher mean referral rate (8.8) than those who felt their workload was too low or about right. They also experienced higher burnout rates.

As actual workload intensity (# patients per hour) increased, referrals decreased (p.551). This interesting finding needs to be studied with regard to patient outcomes.

When considering only internists and family physicians, workload intensity and stress from uncertainty emerged as the most important predictors of referrals. It is also interesting to note that "Physicians with higher percentages of female patients and older patients had higher referral rates" – a factor related to their patient base, not to any of the psychological factors under consideration. Burnout turned out not to be related to rate of referrals.

General internists had the highest levels of burnout (exhaustion and lack of interest in their work). In all cases, as hypothesized, a higher level of control correlated with less burnout. A perceived high workload also correlated with more burnout, but actual workload intensity did not.

An interesting point cited in this article is that in HMOs the "use of specialty care in the management of chronic disease such as hypertension and diabetes is markedly decreased."<sup>6</sup> This could be an important consideration in further development of the primary health care and referrals practice in Egypt, as care for these same chronic conditions presently are covered hospital benefits here. Perhaps additional training for physicians and nurses in the care of these chronic conditions would contribute to a lower referral rate for them.

The article concludes with the statement, "HMO primary care physicians find themselves in the stressful position of being both advocates for the patients and guardians of organizational resources – a predicament likely to result in emotional exhaustion for a number of physicians."

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<sup>6</sup> Greenfield, et al. 1992. Variation in resource utilization among medical specialties and systems of care: Results from the Medial Outcomes Study. *JAMA* 258:1920-1923.

#### Article #4

Atkinson, S., N. Alasford, et al. 1999. "The referral process and urban health care in sub-Saharan Africa: The case of Lusaka, Zambia." *Social Science and Medicine* 49:27-38.

This study was designed to explore the "health seeking behaviors" of the urban populations of Lusaka. Under the health reform program in Lusaka there are three levels of health care facilities: urban health centers (HC), the national hospital's outpatient clinic, and the inpatient wards of that hospital. Users and nonusers of the system were interviewed. This study reports from the viewpoint of the users, nonusers, patients, and the providing facility.

The study discovered these patterns of community use of health facilities in case of illness: 54 percent went to the local HC, 31 percent self-medicated, 8 percent went directly to the hospital outpatient facility. During a second occurrence of the same illness, 66 percent did nothing. Only 2 percent returned to the same facility. Of the 26 percent who sought additional care, most (61 percent) went directly to a hospital. Of the 31 percent whose first course of action was to self-medicate, those who sought a second level of action usually went to the local HC (75 percent).

The following are the responses of persons who chose self-medicating as their first action against an illness:

Reason for not going to HC –  
Lack of money                      37%  
Too long waiting time  
Drugs not available    (Figures not provided)

Opinion of HC –  
Clean  
Good staff attitudes

Upon exiting a local HC, most patients reported that they had not been given a diagnosis (73 percent) and only 8 percent had been referred. Of these, 80 percent had been given a letter. At the same time, 80 percent also reported they did not know why they had been referred.

#### User evaluation of the HC –

Friendly and polite staff:	94%
Good attention	91%
Drugs available	75%
Received diagnosis	21%
Received explanation	20%

#### Outpatient Hospital Clinic

Those who used outpatient hospital services were asked upon entry their reasons for coming to the hospital and, if referred, the type of previous health care sought. On exit they were asked about their view of the quality of the care provided by the outpatient clinics and the information given.

The outpatient facility reported that 60 percent of all patients had come directly to the facility and did not go to the HC first. This was even more prevalent among pediatric patients than adult patients (67 percent vs. 53 percent).

Of the 40 percent who had visited an HC, only 59 percent had been referred (i.e., the remaining 41 percent were self-referred).

The study found a huge disparity regarding the presence of patient referral letters. Among outpatient visitors, of those referred (or who reported having been referred), only 9 percent of the children had referral letters compared with 96 percent of the adults. Further information would be needed to draw a reasonable conclusion.

The study determined that people use the outpatient department of the hospital as an additional HC, usually because they think it will be cheaper (87 percent); i.e., they expect they will get free drugs. People expect the HCs not to have drugs, which means they would have to fill a prescription outside the HC and be required to pay for it. A further 8 percent said it was more convenient to go to the outpatient clinic because they lived nearby.

Most patients using the outpatient clinic did not find the length of time to reach the hospital to be a barrier: 84 percent reported taking less than one hour to reach the hospital. Of the means of travel used, 66 percent traveled by bus, 17 percent walked, and 11 percent took a private taxi.

Most of the patients (76 percent) at the outpatient clinic expected to be told their diagnosis, but only 21 percent received one. Patients generally felt the quality of services was satisfactory, but nearly one-quarter of respondents were not happy with the service received, as indicated in the following percentages:

Good	48%
Adequate	17%
Not happy	23.5%

The main complaints given differed according to whether the outpatients were children or adults. Pediatric patients complained about congestion, mixing with patients who have infectious diseases, and poor staff attitude. The adult patients complained that clinicians did not listen to their problems, rushed the examination, and were rude.

### **The Hospital Inpatients**

Among hospital inpatients, males and females were equally distributed within both pediatrics and adult wards. Of the pediatric patients, 90 percent were under age 5, 36 percent under age 1. Of the adult patients, 41 percent were between 30-44 years of age. An additional 28 percent were between 20-29, and 18 percent were between 45-64 years of age. Only 4.3 percent were over 65. (This low proportion is probably related to the general life expectancy.) At least 80 percent of patients interviewed were admitted from hospital outpatient departments or transferred from another ward within the hospital. Of the patients interviewed, 53 percent were considered chronic; 36 percent acute.

An interesting finding was that bed occupancy rates were 122 percent in the adult ward and 175 percent in pediatrics. This is because adults are placed on the floor when no bed is available. Children are often placed two per bed. The mortality rate in the hospital was 9 percent in pediatrics, 19 percent in the adult ward.

Those who went directly to the hospital or who were referred responded as follows:

68% felt their illness was too serious for the HC  
73% reported they got better

85% felt they were attended to quickly  
44% felt the care had been good  
39% rated care adequate  
16% rated care not good.  
37% of referred patients had to pay at hospital

**The main reasons given for noncompliance with referrals were the following:**

- > No money for transport
- > No money for food once they were in hospital
- > No money for drugs (Expectation was that the University Teaching Hospital would not have drugs either, and purchasing drugs themselves is too expensive)
- > Need to go once to the hospital to make an appointment and then return later to be seen. This would double the cost of the already unaffordable transport.

An important issue here is the management of availability of drugs: HCs are believed not to have them, so people go to the hospital in the hope of receiving free drugs. (Some people believe the hospital won't have the drugs either, so they don't bother to seek treatment at all.)

The entire system for patient health is compromised of a lack of communication in a number of areas. The referral system suffers from not giving information to patients about their diagnoses, or not giving them the reason for their referral. Most HC users who were referred to the hospital received a referral letter, but 80 percent of them did not know the reason for the referral or the diagnosis of their illness. The purpose of the letter is to facilitate entry into the hospital system (although no users reported being turned away from the hospital) and possibly to inform patients of their conditions. This lack of communication between doctor and patient could also be a factor in patients' noncompliance with referrals. The study also reports a "striking lack" of communication from the consultant back to the referring physician.

An interesting point the study discovered is that 93 percent of the "national" hospital inpatients were Lusaka residents. Thus, this hospital was not serving the nationwide population. In addition, more than half the inpatients were considered chronically ill. Many of these could probably be cared for at an intermediate level, by the HC, or by the family with proper instruction and follow-up. This is especially likely to be true as most of them (90 percent) were in the hospital for monitoring or administration of medication. Given the high rate of diabetes and hypertension in Egypt, this issue of overcrowding of the hospital for nonacute reasons is worth considerable attention.

The study concludes that the outpatient department of the hospital is functioning as an additional HC rather than as a substitute facility. Outpatient hospital care is not rated as better than that provided at HCs; however, the waiting time (once at the facility) is perceived to be shorter. The cost and the availability of drugs are very serious issues from the patient's point of view.

**Article #5**

Wu, Chih-Hsing; Jung-Chih Kao; and Chih-Jen Chang. 1996. "Analysis of outpatient referral failures." *The Journal of Family Practice*, 42(5, May 1996). Tainan, Taiwan.

Tainan, Taiwan

This study is targeted specifically at referral failures (noncompliance) and their possible cause and solution. The study took place in southern Taiwan, an area of high population density and moderate socioeconomic status. The study is based on 26,476 patient encounters in a family practice center, located in or next to the national University Hospital. The study found a very low referral rate, only 2.3 percent; however, referrals for routine lab tests, electrocardiography, and simple radiography were excluded. In Taiwan, these procedures are carried out by technicians, not physicians. Thus they do not require a consultation with a specialist. In Egypt these procedures are usually performed by specialized physicians and would thus be counted as referrals. In the pilot sites, however, only electrocardiography would be a referral, and this is not a covered service in the Basic Benefit Package.

The study collected some information about the referrals. Of the 604 referrals, internal medicine received the most referrals (22 percent), female patients comprised 51.7 percent of the referrals and male patients were 48.3 percent of total referrals. The most frequently requested exams were sonography, panendoscopy, and sigmoidoscopy.

Of the 604 referrals, 64 patients failed to complete the referral process. This resulted in a 10.6 percent failure rate, or noncompliance rate. Patients were interviewed by telephone to discover why they had not completed their referral.

Too long a waiting period between receiving the referral and being seen by the consulting physician was the most important reason for referral noncompliance. Also, if the patient believes the referral is not necessary, he or she is more likely not to comply. Communication or rapport between physician and patient was also considered important in producing lower noncompliance rates. Referrals in which the physician contacted the consultant directly and in which the patient received a written referral form yielded the best compliance (success) rate. These findings parallel those of other studies and could be an important consideration in the referral system in Egypt.<sup>7</sup> Older physicians had a lower failure rate for their referrals than did residents, but the reason was not explored. Perhaps these more experienced physicians had better listening skills than the younger physicians. The high level of respect accorded to older persons in the culture could also play a role.

Both the family practice and the consulting specialists worked out of the same location—a university medical center—so issues of location and transport cost and availability were not related to noncompliance with referrals. Whatever barriers these might pose are the same for both types of visits.

Overall, the administrative factor of scheduling the referral appointments within a reasonable amount of time after the initial visit with the family physician was the most significant factor. The longer the patient had to wait between the initial visit and the referral consultation with the specialist, the higher the failure rate.

#### **Article #6**

Lloyd, M., C. Bradford, and S. Webb. 1993. "Non-attendance at Outpatient Clinics: Is it related to the referral process?" *Family Practice* 10(2). Oxford University Press: Royal Free Hospital, London.

This study set out to determine the failure rate (nonattendance or noncompliance rate) of persons referred from the general practice clinic (primary health care center) at the Royal Free Hospital in London to the ENT and gastroenterology clinics (consulting physicians) in the same hospital. The study also hoped to identify statistically significant reasons for noncompliance. The study contacted

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<sup>7</sup> See Lloyd, Bradford, and Webb, 1993 (Article #6, below).



referred patients by mailing them a questionnaire within two weeks after their referral request had been received by the specialist clinic.

There were 998 adult patients referred to the ENT clinic and 494 to the gastroenterology clinic. The referral rate is not given. Of the referred patients, 42 percent were male and 58 percent were female. The referral rate to the two different specialties was the same. The noncompliance rate for ENT was 26 percent and for gastroenterology, 20 percent. No significant differences were noted in noncompliance as related to severity of symptoms, discomfort or anxiety about them, change in severity of symptoms between the time of referral and the time of the consulting appointment, or the age or gender of the patient. As the study took place at the Royal Free Clinic, cost to the patient was not an issue. The availability and cost of transport were not discussed, but more than 80 percent of the patients lived within five miles of the hospital.

The one factor that came closest to explaining the compliance/noncompliance rate was the communication level between the physician and the patient. The higher the patient ranked the communication level, the lower the noncompliance: "Patients were significantly less likely to attend if they had been unable or only partly able to discuss their health problem with their general practitioner." In other words, doctors who listened to the patients explain and discuss their symptoms produced higher compliance rates than doctors who simply gave the patients their diagnosis and told them what to do. This finding may warrant considerable attention in the reform program in Egypt if the noncompliance rate is determined to be too high. Waiting time also ranked fairly high – the longer the patient had to wait for the referral appointment after receiving the referral, the higher the noncompliance rate.



# Annex C: Occurrence and Locations of Referrals Issues in the Articles Reviewed

Annex C provides a graphic representation of the number of times a referral issue is identified in the articles reviewed.

**Table C-1: Occurrence and Locations of Referrals Issues in the Articles Reviewed**

Issues	#1	#2	#3	#4	#5	#6
Noncompliance with (failure of)						
Communication issues						
Quality of patient care						
Communication between referring and						
Length of time between the referral and						
Importance of patients' understanding the						
Communication between doctor and patient						
Additional training for primary care doctors in performing sigmoidoscopies						
Cost of transport to consultant facility						
Distance to consultant facility						
Which specializations receive what percentage of referrals						
Cost of referrals to health care system						
Variations among individual doctors						
Method of actually referring patients						
Female patients are referred more often						
Older patients are referred more often						
Train nurses and physicians in caring for chronic care						



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## **Annex D: Patient Encounter Form, Patient Referral Form, and Procedures for Completing Forms**



# FHF ENCOUNTER FORM

FHU Y Y M M D D Serial Number

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M  
E  
D  
I  
C  
A  
L  
  
R  
E  
C  
O  
R  
D  
S

M	F	Patient Name			Patient I.D.									
HIO #					Other	Newborn	99	79	32	00	Insurance Status			
H H M M					Appointment Time		Fee Collected		H H M M		Time into FHU			

Acute	Antenatal	Fam. Plng.	Chronic	Trauma	Checkup	Immuniz.	Well Baby	Reason for Visit
First Visit								
Follow-up								
Nurse I.D.		Doctor I.D.		FP Room		H H M M		Time into FP Room

F  
A  
M  
I  
L  
Y

Women's Care					Code	Diagnosis	Clinical Information	
5	4	3	2	1				
10	9	8	7	6				
D D M M Y Y								
If pregnant, due date								
Children's Care					Home Visit	Brief: under 10 minutes		Medical Visit
5	4	3	2	1		Intermediate: 10 - 20 minutes		
10	9	8	7	6		Extended: over 20 minutes		
					Sick Leave			

D  
O  
C  
T  
O  
R

Lab Investigations		<input type="checkbox"/> Lab <input type="checkbox"/> Radiology <input type="checkbox"/> Ped. <input type="checkbox"/> Int. Med <input type="checkbox"/> Obs.	Referral to FHC
<input type="text"/> <input type="text"/> <input type="text"/>	Blood  Urine  Stool	<input type="text"/> Specialist <input type="text"/> Hospital	Referral Outside
<input type="checkbox"/> Results Stat.			

R  
E  
F  
E  
R  
R  
A  
L  
S

Pharmacy Requisition						
Price	Quantity	Duration	Dose/day	Form	Drug Name	Code No.
Total Amount		Total Number of Drugs		Pharmacist's Signature		
Amount Paid		Receiver's Signature				
Balance						

P  
H  
A  
R  
M  
A  
C  
Y

\_\_\_\_\_  
Nurse's Signature

\_\_\_\_\_  
Doctor's Signature

Form FHF 1 Rev. 1 07/00

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## Procedures for Completing the Family Health Fund Encounter Form

### **Patient:**

- > arrives at the FHU to see a Family Doctor
- > pays user fee and obtains a ticket
- > shows the ticket to the Medical Records Department
- > is directed to the Family Practice (FP) room or is given an appointment time to see the Family Doctor

### **Medical Records Department:**

- > initiates encounter form when the patient arrives at the FHU for an appointment with a Family Doctor
- > enters encounter form # consisting of FHU alpha digit (A for Abu Qir, S for Seuf, X for Alexandria Medicine Center), date of visit (YYMMDD), and a serial number starting with 001 each day for the first patient, 002 for the second patient, 003 for the third patient, etc.
- > enters the following information on the encounter form:
  - ↑ patient identification number
  - ↑ patient name
  - ↑ patient gender M or F
  - ↑ insurance status: checks box 00 if uninsured; if HIO beneficiary, marks box indicating Law # 32, 79, 99, Newborn or Other
  - ↑ time into FHU, hour and minute: HHMM
  - ↑ fee collected as indicated on ticket
  - ↑ FP room two-digit # indicating where patient is rostered: 01, 02, 03, 04, 05, etc
  - ↑ the two-digit doctor identification # according to the doctor who is present on shift in the FP room at the time of the appointment
  - ↑ the two-digit nurse identification # according to the nurse who is present on shift in the FP room at the time of the appointment
- > pulls the Family Folder from the filing cabinet
- > attaches the encounter form to the Family Folder
- > sends the Family Folder to the FP room where the patient is rostered

### **Family Doctor Team:**

- > receives the patient
- > reviews the Family Folder for patient history



- > examines each patient on a “first come first-served” basis
- > enters the details of clinical information:
  - ↑ enters provisional or final diagnosis and diagnostic code
  - ↑ if patient is a woman, enters women’s care codes, if appropriate
  - ↑ if woman is pregnant, enters due date: DDMMYY
  - ↑ if patient is a child, enters children’s care codes, if appropriate
  - ↑ checks box indicating duration of visit: brief if under 10 mins, intermediate 10-20 mins, or extended if over 20 mins
  - ↑ checks box if home visit
  - ↑ checks box if sick leave certificate issued
  - ↑ checks appropriate box for lab test if blood, urine, or stool investigation is requested
  - ↑ checks box for “results stat” if results are required urgently
- > if patient is referred to FHC, checks box indicating specialist to whom referral is made: Obs., Int., Med., or Ped., and completes a referral form
- > if patient is referred for radiology, checks Radiology box and completes a referral form
- > if patient is referred for lab test other than blood, urine, or stool, checks Lab box and completes a referral form
- > if patient is referred to outside specialist, enters name of specialist and completes a referral form
- > if patient is referred to hospital, enters name of hospital and completes a referral form
- > if drugs are prescribed, completes pharmacy requisition portion of encounter form:
  - ↑ drug code
  - ↑ drug name
  - ↑ drug form (e.g., tablets capsules, suspension, etc.)
  - ↑ dose per day
  - ↑ duration
  - ↑ quantity
  - ↑ price
- > doctor signs form, writes two-digit doctor identification number and date under signature
- > nurse signs form, writes two-digit nurse identification number and date under signature
- > sends both copies of encounter form to pharmacy, if drugs prescribed
- > sends both copies of encounter form to data entry if no drugs prescribed

**Pharmacy:**

- > dispenses drugs prescribed
- > completes pharmacy requisition portion of encounter form for drug information such as total number of drugs, total amount, amount paid, and balance
- > obtains receiver's signature for drugs received
- > retains first copy of encounter form for audit purposes
- > sends second copy of encounter form to data entry

**Data Entry:**

- > receives encounter forms from pharmacy or from FP rooms
- > enters encounter form data
- > when data entry completed, sends encounter forms to Medical Records for placing in Family Folder
- > transmits encounter form data file to Family Health Fund within 48 hours of end of each calendar month

**Medical Records**

- > receives completed encounter forms
- > files encounter forms in Family Folders

REFERRING  
FAMILY  
DOCTOR  
SPECIALIST  
/ HOSPITAL

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## Procedures for Completing the Referral Form

### Family Doctor:

- > initiates referral form whenever a referral is made for the following:
  - ⌒ lab investigation other than blood, urinalysis, or stool
  - ⌒ x-ray
  - ⌒ referral to specialist at FHC
  - ⌒ referral to specialist outside
  - ⌒ referral to hospital
  - ⌒ (Note: separate referral forms are required for each type of referral as listed above)
- > enters the encounter form number and a serial number 1-9 as the referral form number
  - ⌒ (Note: The referral system accommodates up to nine referrals related to each encounter form. Multiple referrals must quote the same encounter form number plus a different serial number)
- > enters patient identification number
- > enters patient name
- > checks M or F box to indicate gender of patient
- > if referral is for investigations, checks lab or x-ray and writes names of tests ordered
- > if referral is to specialist in FHC, checks box to indicate whether referral is to Int., Med., Ped., or Ob/Gyn and reason for referral
- > if referral is to outside specialist, enters name and specialty and reason for referral
- > if referral is to hospital, enters name of hospital and reason for referral
- > in the next section, enters reason for referral or lists the tests ordered
- > completes initial findings/diagnosis section with:
  - ⌒ preliminary diagnosis
  - ⌒ diagnostic code
  - ⌒ significant findings, results of tests to assist specialist/hospital in diagnosis and treatment
- > signs the form and enters the date
- > gives first two copies of the form to the patient to take to the lab, x-ray, specialist, or hospital
- > sends third copy of referral form to data entry

**Data Entry:**

- > receives third copy of referral forms from FP rooms
- > enters referral form data
- > when data entry is completed, sends referral forms to Medical Records for placing in Family Folder
- > transmits referral form data file to FHF within 48 hours of end of each calendar month

**Medical Records**

- > receives completed third copy of referral forms from data entry
- > files third copy of referral form in Family Folder

**Patient:**

- > makes appointment; arrives at the lab, x-ray facility, office of the specialist, or at the hospital
- > presents the two copies of the referral form

**Lab, X-ray Facility (upon receiving referral):**

- > collects necessary specimens; performs ordered investigations as requested on the referral form
- > sends results to Family Doctor on internal lab or x-ray reporting form
- > retains second copy of referral form
- > sends first copy of referral form to Medical Records

**Specialist (when receives referral):**

- > examines patient
- > conducts or orders necessary investigations
- > prescribes drugs as necessary
- > provides treatment to the point of stabilizing the condition, according to clinical practice guidelines
- > when condition is stabilized, completes section of referral form, "Report from Specialist to Family Doctor"
  - ↑ enters date of patient's first visit
  - ↑ enters date of patient's last visit

- ↑ enters total number of patient visits from first visit to last visit
  - ↑ indicates if patient referred to consultant or hospital and name of consultant or hospital
- > completes last section of form, “Clinical Report from Specialist/Hospital to Family Doctor”
- ↑ reports on results of any investigations
  - ↑ indicates any drugs prescribed
  - ↑ indicates any surgical interventions
  - ↑ lists any medications prescribed
  - ↑ indicates final diagnosis
  - ↑ indicates follow-up treatment recommended such as drug (name, dose, and duration) or other treatment
- > enters signature, name, and date on the referral form
- > retains second copy of referral form
- > sends first copy of completed referral form to the Family Doctor

**Hospital (when receives referral):**

- > arranges for examination of patient
- > admits patient if necessary
- > conducts or orders necessary investigations
- > prescribes drugs as necessary
- > provides treatment to the point of stabilizing the condition, according to clinical practice guidelines
- > when condition is stabilized, completes section of referral form, “Report from Hospital to Family Doctor”
  - ↑ indicates if patient treated as outpatient and the number of visits
  - ↑ indicates if patient admitted as inpatient and, if so, admit date, discharge date, and days of stay
  - ↑ completes last section of form, “Clinical Report from Specialist/Hospital to Family Doctor”
  - ↑ reports on results of any investigations
  - ↑ indicates any drugs prescribed
  - ↑ indicates any surgical interventions
  - ↑ lists any medications prescribed
  - ↑ indicates final diagnosis

↑ indicates follow-up treatment recommended, such as drug (name, dose, and duration) or other treatment

- > enters authorized signature, name, and date on the referral form
- > retains second copy of referral form
- > sends first copy of completed referral form to the Family Doctor

**Family Doctor:**

- > reviews Specialist/Hospital report on first copy of referral form
- > sends first copy to Medical Records for filing in Family Folder

**Medical Records:**

- > receives first copy of referral form from Family Doctor
- > files first copy in Family Folder, replacing third copy previously filed
- > destroys third copy of referral form when replaced by first copy





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## Annex E: Bibliography

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